

CLAIMS

1. A formulation comprising an active ingredient preserved in glassy or amorphous particles, the particles being suspended in a liquid in which at least one component comprises a hydrofluoroether, perfluoroether, hydrofluoroamine, perfluoroamine, hydrofluorothioether, perfluorothioether hydrofluoropolyether, perfluoropolyether or a general formula

R1-X-R2 or

R1-X-(CF₂Y)_n(CF₂CF₂Z)_m-R2 or

10 R1-[(X-CF-R2)_n(X-CF₂)_m]OR3

where X, Y and Z are defined as O (oxygen), an ether, NR₃ (N=nitrogen), an amine or S (sulphur); and each of R1, R2 and R3 are defined as a non-fluorinated, partially fluorinated or fully fluorinated alkyl, cycloalkyl, aryl or arylalkyl group or an organic functional group, halogen group or cyano group.

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2. A formulation according to Claim 1 in which the particles contain a sugar glass or a glass which is a mixture of sugar, metal carboxylate, amino acid and or calcium phosphate or any combination of these.
- 20 3. A formulation according to Claim 1 or 2 in which the particles have a density which is matched to the density of the liquid sufficiently closely that the particles will remain in suspension under normal conditions.
4. A formulation according to any preceding claim in which the liquid contains different components specified in claim 1 mixed in proportions to give a required density.
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5. A formulation according to any preceding claim in which the liquid contains a perfluorocarbon mixed with one or more components specified in claim 1.
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6. A formulation according to any preceding claim in which the active ingredient is a vaccine.
7. A formulation according to any preceding claim in which the particles
5 are made by spray drying
8. A formulation according to any one of Claims 1 to 6 in which the particles are made by freeze drying.
- 10 9. A formulation according to any one of Claims 1 to 6 in which the particles are made by grinding.
10. A method of making a formulation according to Claim 4 or 5 including the step of selecting liquids to give the required density matching properties and
15 mixing them with the particles.
11. A formulation comprising an active ingredient preserved in glassy or amorphous particles, the particles being suspended in a liquid comprising a hydrofluoroether.